

Patent Claims

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1. Exhaust gas turbocharger for an internal combustion engine, with a turbine in the exhaust gas flow and a turbine driven compressor in the intake flow of the internal combustion engine, wherein the turbine (1) has a flow channel (3) with a radial flow entry cross-section (3a) and a flow ring (7) bordering the flow entry cross-section (3a), and wherein an adjustable ring of guide vanes (5) is provided in the radial flow entry cross-section (3a) for variably adjusting the flow entry cross-section (3a), thereby characterized, that the flow ring (7) is axially displaceable in the housing of the exhaust gas turbine (1) between a position contacting the ring of guide vanes (5) and a position exposing a gap between the flow ring (7) and the ring of guide vanes (5).

2. Exhaust gas turbocharger according to Claim 1, thereby characterized, that abutments or end stops (18, 19) are provided fixed relative to the housing for limiting the axial displaceability of the flow ring (7).

3. Exhaust gas turbocharger according to Claim 1 or 2, thereby characterized, that in the radial flow cross-section (3a) spacer sleeves (14) are provided, which determine the minimum axial breadth of the radial flow entry cross-section (3a).

4. Exhaust gas turbocharger according to one of Claims 1 through 3, thereby characterized, that a seal ring (11) is

provided on the radial inner-lying side of the flow ring (7) for sealing against a housing fixed component (13).

5. Exhaust gas turbocharger according to one of Claims 1 through 4, thereby characterized, that the radial ring of guide vanes (5) includes adjustable guide vanes (6), which include cover discs (16, 17) on at least one axial end face.

7. Exhaust gas turbocharger according to one of Claims 1 through 6, thereby characterized, that adjustable guide vanes (6) of the radial ring of guide vanes (5) are mounted in the turbocharger housing via an axial shaft (15a).

8. Exhaust gas turbocharger according to one of Claims 1 through 7, thereby characterized, that adjustable guide vanes (6) of the radial ring of guide vanes (5) are mounted in the flow ring (7 via an axial shaft (15b)).

9. Exhaust gas turbocharger according to one of Claims 1 through 8, thereby characterized, that the flow ring (7) experiences due to a dropping of the static pressure in the radial ring of guide vanes (5) a resulting pressure force in the axial direction of the turbine wheel, in particular in the direction of the radial ring of guide vanes (5).

10. Exhaust gas turbocharger according to one of Claims 1 through 9, thereby characterized, that in the flow ring (7) axial relief boreholes are provided extending between the axial faces of the flow ring.